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## ST Engineering: A Globalisation Success Story

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*Tan Pheng Hock is president and CEO of Singapore Technologies Engineering (ST Engineering), one of the largest companies listed on the Singapore stock exchange with a market capitalisation of nearly S\$11 billion. The global integrated engineering group, which reported revenues close to S\$5 billion in 2006, employs a total workforce of 18,000 employees with operations in 20 countries, and has 100 subsidiaries serving customers in more than 70 countries. Forty years ago, ST Engineering's predecessor, then known as Chartered Industries, was set up to produce bullets for the local armed forces. Today, ST Engineering has diversified into the aerospace, marine, electronic and land sectors with commercial clients accounting for nearly 70% of its turnover.*

*Tan joined the marine arm of the group in 1981 with a first class honours degree in marine engineering. He held various senior posts before his appointment as CEO in 2002. He steered the group through the SARS crisis at the time which provided the impetus for Tan to step up the pace of globalisation at ST Engineering. He is also chairman of the Singapore Workforce Development Agency and the Nanyang Polytechnic Board of Governors, and serves as a director on the boards of SembCorp Marine, Neptune Orient Lines and Cradance Services. In addition, Tan is a member of the Consultative Committee of the National University of Singapore's Department of Mechanical Engineering, the Singapore Quality Award Governing Council, and the Temasek Defence Systems Institute.*

*Tan was a featured speaker recently at the Singapore Management University's Wee Kim Wee Centre CEO Talks series. He spoke to Knowledge@SMU about ST Engineering's globalisation strategy and key learnings.*

**Knowledge@SMU:** Could you briefly describe your main business areas?

**Tan:** We have four strategic business areas (SBAs). The operating companies are ST Aerospace, ST Marine, ST Kinetics and ST Electronics, with 50% of our business coming from our aerospace arm, and between 16 to 20% each derived from the marine, land systems (ST Kinetics) and electronics sectors.

From a geographical perspective, Asia used to account for up to 72% of turnover in 2002, but this has gone down to 50% today. However, business continues to grow in Asia; China, particularly, is an important market in the region for our commercial business. Proportion wise, we are building up income streams from the US (33%) and Europe (10-15%) at a much faster rate, largely due to acquisitions over the last 3-4 years. We have some presence in Central Asia and Africa and, going forward, are looking at new markets like India and the Middle East. This could include joint ventures, projects and maybe even acquisitions.

**Knowledge@SMU:** What guides your strategy for growth?

**Tan:** Today, we have our own intellectual property (IP) developed organically and through acquisitions and partnerships which, together with our global track record of achievements, puts us in good stead to aspire to be a dominant and significant global player. At the end of the day, you adjust to and even lead change where the opportunity arises.

Increasingly, it is difficult to be good in many technological areas as solutions get more complex. In our own commercial sectors, for example, we can be global leaders in some areas, regional leaders in others or niche champions. The multiple industry applications of our current technologies are an intrinsic strength of the group. With our size, capabilities and skills, we have resources to develop a technology roadmap to meet market demands and customer needs. We commit, annually, 3% of revenue to research and development. In our R&D investments, we are guided by the philosophy of developing new capabilities that can be applied by the military and commercial sectors - in other words, dual-use technologies.

To be effective globally, one must at the same time be effective locally wherever one operates. This requires the ability to appreciate the local way of doing things, and to understand local community and government sensitivities and intricacies. To succeed, it is good to get a local champion. For example, in the US, our head office and the electronics, land systems and marine sector operations are headed by astute US-based industry veterans. In that country, lobbying is considered an essential part and parcel of doing business.

Also, at one end of the scale, we are prepared to send a manager overseas for up to two to three years to study and understand a new market and to extend network opportunities without expecting guaranteed returns in that time frame. If the timing is not right, we will bide our time and review our presence in the market at an appropriate time. It is important to breathe the air in that market and understand the environment before you jump into business there.

**Knowledge@SMU:** What has been your experience in overseeing the group's growth globally?

**Tan:** When you look at the recent experience with Severe Acute Respiratory Syndrome (SARS) which was very much Asia-centric and had a tremendous impact on the region, it brings to light the message about putting all your eggs in one basket. If you are a single region or single locality driven business, when an epidemic like SARS strikes, people shun that region. In this case, they avoided Southeast Asia even though Singapore was not quite as affected, but the world didn't see it that way. It can get to be very, very challenging trying to do business in such a climate.

So for us one of the key issues is to diversify geographically. Firstly we've got to have presence beyond the region with operations in the US and Europe. Secondly, it is important to diversify our customer base globally serving a wide geographical spread of clients. Thirdly, our strategy is to be a player in multi-industries to minimise the impact of business cycles. An example is in digital media and animation where our capabilities and know-how can be adapted for education, entertainment and other commercial training purposes, and also for military simulator training applications.

**Knowledge@SMU:** What key lessons have you learnt?

**Tan:** Going global humbles you in many ways, because you may be big in your home base but when you go beyond your shores you are just an SME. As a player in a new market, you need to be creative, you need to do things quite differently and appreciate that what works at home may not apply in the new environment. You need to adapt and adopt new approaches in the environment you enter into, not a one size fits all approach.

When entering someone else's market, there are many things you do not know. Existing incumbents may put obstacles in the way. That's why I encourage my engineers to visit competitors, partners and exhibitions and look at what others can do. The reason is that it forces us to compare what we have done. Can we do it faster, better or package the product in a nicer way? If we are better that's fine but if we are not, then why can't we improve on existing processes or performance?

We have to be on our toes especially when going into a new market, but there is no need to always compete with the incumbents. It will be more common, in future, to have what is known as 'co-opetition' which is a hybrid of cooperation and competition. We can compete in some markets and cooperate in others.

**Knowledge@SMU:** Any problems with geographic expansion?

**Tan:** We do the necessary due diligence with every market we move into or with each acquisition that we feel will complement the strength of the group, but we cannot expect 100% success.

Since coming aboard five years ago, I have had to make hard decisions to pull out of two acquisitions. One was an aerospace acquisition in the US in 1997. I decided to close it down in 2002 because the economics didn't turn out right -- it was an aviation facility that had limited capacity. The other was a joint venture formed in 2002, in the aerospace industry too, with a UK partner. The high cost in the UK was a consideration which, coupled with no base load to kick-start the facility, [meant] we had to fight for every aircraft maintenance project. I made the decision to pull out in 2005 which is always difficult because of the thought that business can turn around given more time. At the end of the day, we have to move on and recognise that there will be other opportunities.

**Knowledge@SMU:** In view of the group's fast-paced growth, is talent sourcing an issue?

**Tan:** We need a multinational talent pool that is geographically mobile. Our managers have to be rotated through more than one SBA. To be a global company you need global experience for local effectiveness. We started by sending out managers from Singapore, and the next stage will be cross postings of overseas managers to Singapore.

We engaged a consultant who helped us identify eight leadership competencies that are crucial to success in the cross-cultural working environment typical of our group. So far, the [training] course developed has been attended by some 400 middle and senior managers. The group will give full support in bridging gaps in this area, and will send staff to external courses which can help address this issue.


**Knowledge@SMU:** A global network can both be a source of strength and weakness. Have there been more pros than cons?


**Tan:** Certainly the group as a whole has benefited tremendously from the synergy. Although acquisition is one pillar for our expansion overseas -- and I've been through about 15 such ventures in the last five years -- each project brings fresh experiences to integrate and create value from forging such relationships.

Firstly, the global network puts us in good stead to lower the cost of doing business. For example, we can source for cheaper subsystems for marine and electronic systems or for integration into specialty vehicles that are made in Asia for our US operations. We can develop a capability in Singapore and then transfer it to the US as in the aerospace sector for MRO (maintenance, repair and overhaul) work.

On the Singapore side, we can license domain knowledge of our IP to our US counterparts to benefit their clients. Likewise, we can apply the IP domain knowledge from our European or US operations to our operations in Asia. Within our global network, individual centres with contacts and networks prove invaluable in helping counterparts from other regions gain access to local markets.

Collectively, the group with its total infrastructure, manpower and knowledge as a whole is better placed to gain a prospect's confidence when pitching for bigger projects. The sharing of resources and cross-exchange of knowledge also afford opportunities for internal benchmarking so that member companies can determine where they stand in terms of quality and work standards.

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